

Customer No.: 31561  
Application No.: 10/605,084  
Docket No.: 9893-US-PA

## IN THE CLAIMS

Please amend the claims as follows.

**Claims 1-3 (canceled).**

**4. (currently amended) A method of forming a polysilicon thin film transistor, comprising the steps of:**

**forming a poly-island layer over a substrate;**

**forming a gate insulation layer over the poly-island layer;**

**forming a gate electrode over the gate insulation layer above a section of the poly-island layer destined for forming a channel region;**

**conducting an ion implantation of the poly-island layer using the gate electrode as a mask to form source/drain regions in the poly-island layer outside the channel region; and**

**sequentially forming an oxide layer and a nitride layer over the substrate to cover the gate electrode and the gate insulation layer, wherein the oxide layer and the nitride layer of the serving as a inter-layer dielectric layer have a thickness relationship given by the following inequality, equation:  $T_{ox} \geq (T_{nitride} \times 9000 \text{ \AA})^{1/2}$ ,**

**where  $T_{ox}$  represents the thickness of the oxide layer (in  $\text{\AA}$ );  $T_{nitride}$  represents thickness of the silicon nitride layer and that thickness of the nitride layer is between 50 $\text{\AA}$  and 1000 $\text{\AA}$ .**

**5. (original) The method of claim 4, wherein the step of forming the poly-island layer over the substrate includes the sub-steps of:**

**depositing amorphous silicon over the substrate;**

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**conducting a laser crystallization or an excimer laser annealing process to melt the amorphous silicon and re-crystallize into a polysilicon layer; and**

**conducting photolithographic and etching processes to form islands of polysilicon.**

**6. (original) The method of claim 4, wherein after forming the poly-island layer over the substrate, further includes conducting a channel ion implantation so that the poly-island layer contains dopants.**

**7. (original) The method of claim 4, wherein the step of forming a gate insulation layer over the poly-island layer includes carrying out a plasma-enhanced chemical vapor deposition.**

**8. (currently amended) The method of claim 4, wherein the method may further include the step of forming a lightly doped drain structure between the source/drain region and the channel region.**